

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000872**Date Inspected:** 18-Nov-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Fu Yuhong**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Deck & 77 meter mock ups**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) inspector, Scott Croff, was present at Zhenhua Port Machinery Company, Ltd (ZPMC) to observe the scheduled mock up construction and production construction of the SAS Superstructure.

Bay 1: The QA inspector observed completed welds between the diaphragm plates and the closed ribs on the 13 meter deck mock up section. The ZPMC liaison Shen Xiu Jun informed the QA inspector that Quality Control (QC) inspection has been completed and accepted on 80mm of each complete joint penetration (CJP) weld. The QA inspector was also informed that ZPMC workers will be grinding the ends of the upper terminations to blend them into the pre-cut radius in the diaphragm plates.

Bay 2: The ZPMC liaison Shen Xiu Jun informed the QA inspector that magnetic particle testing (MT) has been conducted on tack welds of the web plates for the 77 meter mock up section. The QA inspector was informed that the tack welds were ready for observation by the QA inspector. The QA inspector was directed to Bay 2 where the QC inspector Zhou Dong Yun was observed conducting MT of these tack welds. The QA inspector made random observations of the tack welds and MT as it was being conducted. At the time of observation, the QA inspector noted that several tack welds have been marked for grinding by the QC inspector. The QA inspector asked the ZPMC worker Shen Xiu Jun when the QC inspection would be completed. The QA inspector was informed that the MT inspection would not be completed for several hours.

The QA inspector was later informed of the completion of the QC inspector's MT and visual inspection of the tack welds on the 77 meter mock up section. The QA inspector made random observations of these welds as they were presented. At the time of observation, the QA inspector noted that no weld tabs are in place at any of the ends of

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the partial joint penetration (PJP) welds and that all observed tack welds appear to be visually conforming to the contract requirements.

The QA inspector was also informed of excavations on the 77 meter mock up, skin plate stiffener MA2-3. The QA inspector was notified that QC MT inspection has been conducted and the ZPMC liason person Fu Yuhong asked the QA inspector to conduct a verification MT on the excavations. The QA inspector was informed that QC conducted ultrasonic testing on these welds and rejectable indications had been removed. The QA inspector asked to review the UT report that indicated where the rejectable indications were located. Upon review of the report, the QA inspector asked the QC inspector Fu Yuhong if any QC inspectors have verified that the indications were removed. The QA inspector noted that the rejectable indications written on the UT report appear to be at different depths and X axis locations than the weld excavations currently measure. The QC inspector reviewed the UT report and could not provide answers to the QA inspector. The QA inspector then informed the QC inspector that verification of the excavations could not be conducted at this time.



### Summary of Conversations:

As noted above, the QA inspector Scott Croff had conversations with the ZPMC liason Shen Xiu Jun and QC inspector Fu Yuhong. The QA inspector was notified of the progress and completion of QC inspections relating to UT and MT on the 13 meter deck mock up and 77 meter tower mock up. The QA inspector also had conversations with the QC inspector Fu Yuhong regarding the location of excavations on MA2-3 and the locations that are described in the QC UT report. After reviewing the UT report, the QC inspector remarked that was not sure if the indications listed on the UT report could be placed in the excavated portions of the weld. The QA inspector then informed the QC inspector that verification of the excavations could not be conducted at this time. There were no other notable conversations during this shift.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Croff, Scott	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar, Robert	QA Reviewer

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